

they are flat-topped and do not project as in the case of *Colella pedunculata* and some other species.

The endostyle is long and narrow, but conspicuous; its course is nearly straight. The languets (Pl. XIV. fig. 19, *l.*) are well developed. The tentacles are very long and thin. Their bases form a rather small circle (Pl. XIV. fig. 20) and are closely placed. There are about two dozen large tentacles and some smaller intermediate ones. The peripharyngeal band is very distinct, it does not form a peritubercular area. The mass formed by the nerve ganglion and neural gland is large and of an elliptical shape (Pl. XIV. fig. 20, *n.g.*). From its anterior end projects a very large and conspicuous neural duct with thick walls, which runs forward under the peripharyngeal band to open in the prebranchial zone, not far behind the base of the tentacles (Pl. XIV. fig. 20, *d.t.*). In all probability this very distinct neural tube really corresponds to the funnel-shaped enlargement, lined by columnar ciliated cells which is found in other forms (see *Botrylloides fulgurale*, Pl. III. fig. 8), and not to the more delicate part of the duct lying behind that.

The alimentary canal is relatively not very large. The œsophagus is a narrow tube which runs from the dorsal edge of the posterior part of the branchial sac backwards and dorsally to open into the irregularly globular stomach (Pl. XIV. fig. 21). The œsophagus does not enter at the anterior end of the stomach, but a little way back on the inner edge. The stomach is thick walled, but has no folds in its interior. At the posterior end of the stomach the intestine commences by a very narrow passage which soon expands into a somewhat quadrate thick-walled dilatation (Pl. XIV. fig. 21); from this cavity the intestine continues backwards as a wide tube which turns round ventrally and then anteriorly to become the rectum. From this point forward the tube contains a series of ovate faecal pellets of a dark colour, which are just visible to the naked eye (Pl. XIV. fig. 21, *r*). The rectum is very long; it crosses the œsophagus, and is then continued up the dorsal edge of the branchial sac for a very considerable distance. The anus is small but has a prominent margin (Pl. XIV. fig. 21, *a.*).

The reproductive organs are large, and form an ovate mass (Pl. XIV. fig. 22) extending for a considerable distance behind the alimentary canal. They thus agree with the arrangement seen in the other Polyclinidæ, where there is always more or less of a post-abdomen developed, in which the genital glands are situated. In the development of this region of the body the present species is intermediate between *Colella* and the Distomidæ on the one hand, and most of the Polyclinidæ on the other.

The mature Ascidiozooids are hermaphrodite. Ova of various sizes and ages are found along with fully developed spermatic vesicles (Pl. XIV. fig. 22, *o.* and *t.v.*). The ova form a clump upon one side of the genital mass, while the ovate spermatic vesicles are grouped in front and at the sides, and especially behind, where they form the most posterior part of the body of the Ascidiozoid. The vas deferens is large and is always a